ATM Network Performance Report

April 2020

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Summary

April Performance

Network Performance in April 2020 was mainly affected by COVID-19 related traffic reductions. Due to the lower demand April 2020 had the lowest airborne delay and least number of significant/notable[1] events in the last four years. Ground Delay Programs were not required for the East Coast airports in April. Several runways were also closed to accommodate aircraft parking, with lower capacity runway modes also utilised more often due to the lower demand.

FIFO (fly in fly out operations) flights were still maintaining or increasing frequency, with Perth becoming the busiest airport, Brisbane the second busiest and Adelaide the fourth busiest. Each of these airports handled many FIFO flights operating within their respective states. FIFO flights remained relatively stable, or increased in some cases, due to additional operations being provided to transit the workforce while complying with social distancing guidelines.

The combined 75th percentile performance during April for airborne delay across the four major airports (Sydney, Melbourne, Brisbane and Perth) was **0.4** minutes, and the median airborne delay across these airports was **-1.1** minutes. The 75th percentile and median performance met the targets of 3.3 minutes and 0.6 minutes, respectively. The median and 75th percentile decreased compared to the same period last year. There were no significant and/or notable delay events in April.

Across the four major airports arriving traffic in April 2020 (8,549) was down 78% from April 2019 (39,265). Perth is now the busiest airport, followed by Brisbane, Sydney, Adelaide and then Melbourne.

The maximum daily 75th percentile of airborne delay seen for each airport was:

- Sydney: 1.8 minutes on April 10
- Melbourne: 3.0 minutes on April 11
- Brisbane: 1.3 minutes on April 12
- Perth: 2.5 minutes on April 2

The daily 75th percentile values by airport by day are shown in **Figure** 1.

[1] Definitions are located in Appendix A

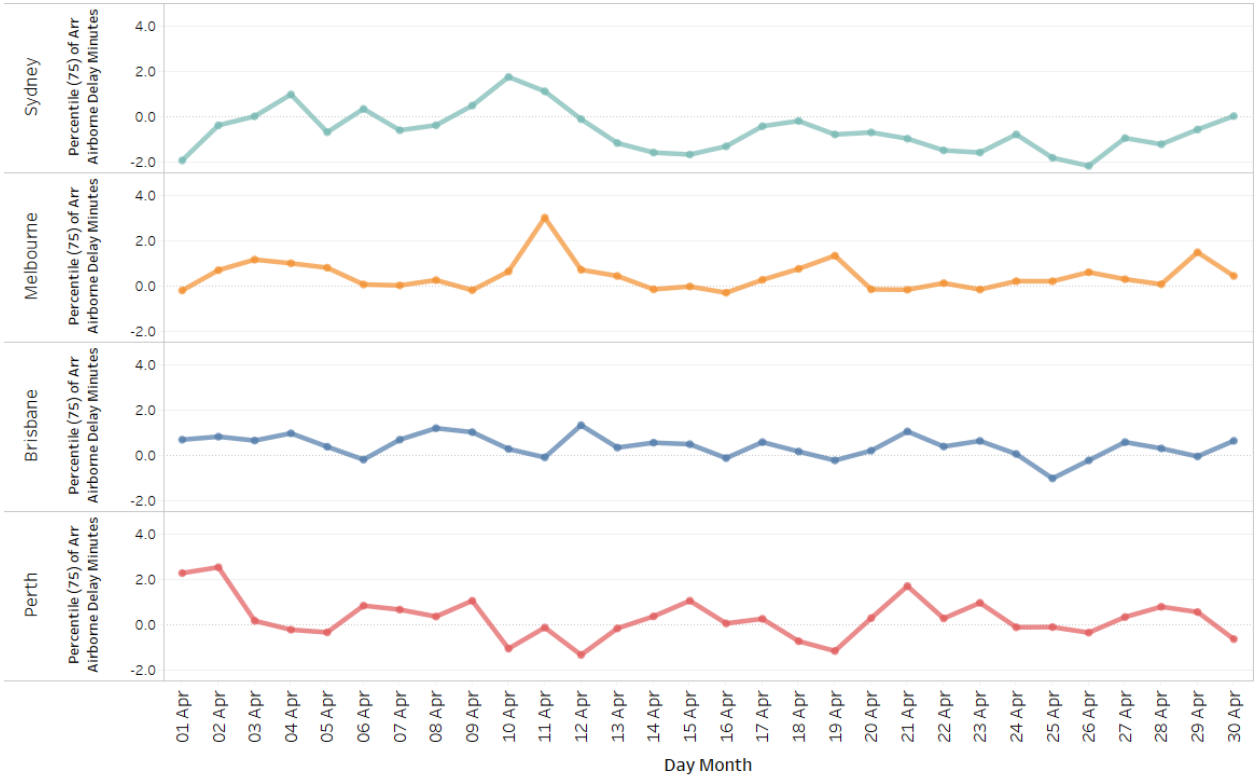

Figure 1: 75th percentile of airborne delay in minutes across each day.

Traffic levels and composition changes

Figure 2 shows traffic[2] levels and composition changes since the beginning of 2018.

Overall, domestic and international traffic decreased in all four major airports in comparison with April 2019 levels. The decrease continues from the initial downturn due to COVID-19 seen in February, with a much larger drop seen in both domestic and international traffic this month.

- Overall traffic: Sydney (-85.3%), Melbourne (-88.2%), Brisbane (-74.7%), and Perth (-47.1%)
- International traffic: Sydney (-74.6%), Melbourne (-84.8%), Brisbane (-89.0%), and Perth (-87.7%).
- Domestic traffic: Sydney (-88.6%), Melbourne (-89.0%), Brisbane (-72.0%) and Perth (-39.7%).

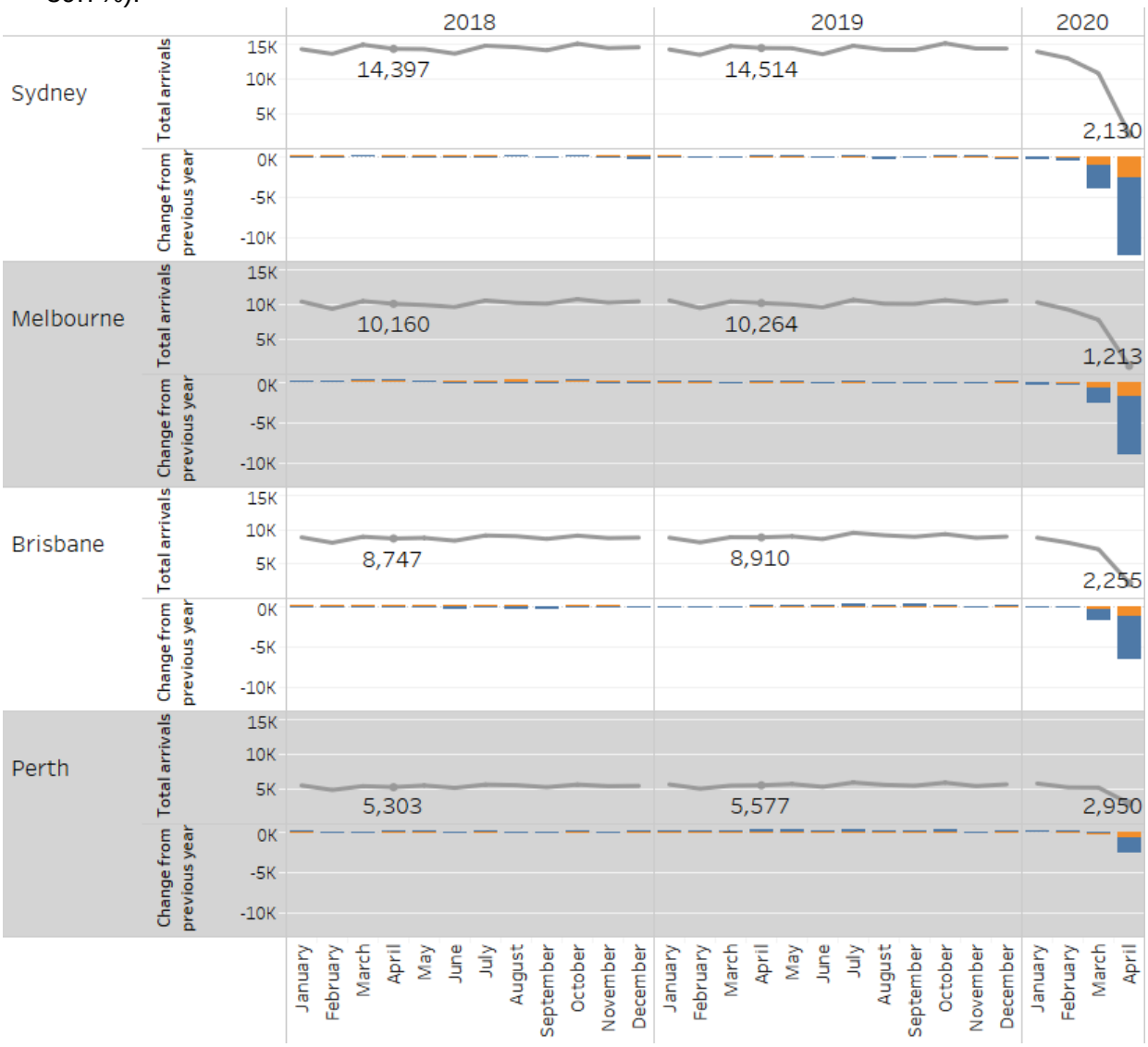

Figure 2: Traffic levels and composition change since January 2018. Grey lines show overall traffic numbers (annotated figures compare current month to same month one and two years earlier). Coloured bars show change in traffic compared to the same month the previous year for domestic (blue) and international (orange) flights.

[2] Traffic refers to instrument flight rules traffic only (visual flight rules traffic is not included)

Across the country flights were down 64% in April 2020 (from April 2019), the breakdown of flights by proportion of total flights is shown in **Table 1**.

Table 1: Market segment proportions by year (April 2019/2020).

Market segment	April 2019	April 2020
Intrastate	46%	73%
Interstate	36%	16%
International	17%	8%
International overflights	2%	1%

The most common intrastate flights in April are (in order):

- Queensland (both 2019 and 2020)
- Western Australia (both 2019 and 2020)
- New South Wales (both 2019 and 2020)

The most common interstate flights in April are (in order):

- Queensland-New South Wales (both 2019 and 2020)
- New South Wales-Victoria (both 2019 and 2020)
- Queensland-Victoria (2019) and Victoria-Tasmania (2020)

Figure 3 compares traffic density between April 2020 (top) and April 2019 (bottom). The densities represent the average number of flights per day, with in the colour variations on a log scale so that enroute traffic is more visible relative to regions around busy airports. Traffic noticeably decreases in April 2020, particularly international traffic and traffic between major Australian airports. Perth traffic to/from mining regions and intrastate flights to/from Brisbane and Adelaide appear to have remained relatively strong in April 2020. As a result, Adelaide became the fourth busiest airport, surpassing Melbourne. Finally, the route between Sydney and Asia appears relatively stable compared to the previous year.

Table 2 shows the twenty busiest city pairs in April 2019 with a comparison to April 2020. **Table 3** shows the twenty busiest city pairs in April 2020 with a comparison to April 2019. Of the top 20 city pairs in April 2019 only seven remained in the top 20 in April 2020 (all of these decreasing by at least 55%). Of the top 20 city pairs in April 2020 only three increased since April 2019 (all of these increasing by at least 40%), these were Brisbane-Moranbah, Olympic Dam-Adelaide and Coondewanna-Perth. The number of intrastate city pairs increased from five in April 2019 to thirteen in April 2020. The number of international city pairs in the top twenty remained at two, but Sydney-Auckland and Melbourne-Auckland were replaced by Sydney-Hong Kong and Sydney-Singapore. The three busiest city pairs in April 2019 were Sydney-Melbourne, Sydney-Brisbane and Melbourne-Brisbane, respectively, by a large margin from the next busiest city pair – these dropped to second, third and ninth place, respectively, in April 2020.

Figure 4 shows traffic levels by month over the last 15 months broken down into various categories (operators, types of flight etc.).

April 2020

April 2019

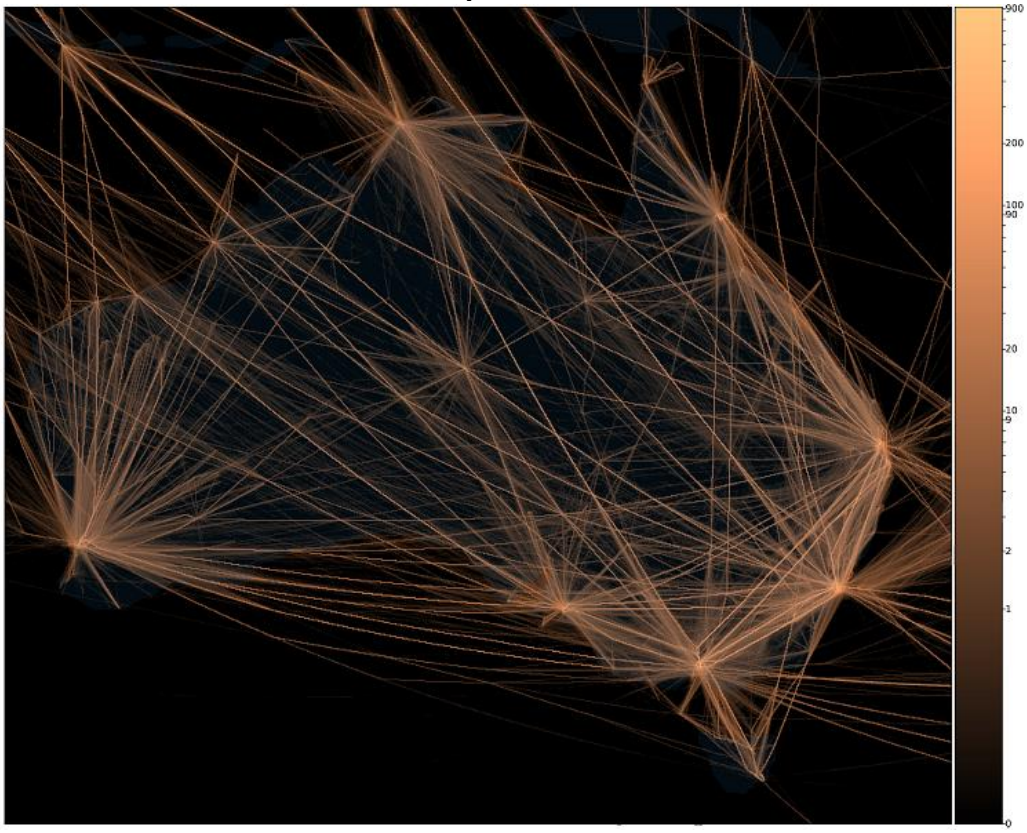

Figure 3: Traffic density comparison. April 2020 (top) and April 2019 (bottom). Flights per day are shown on a log scale to make the enroute traffic more visible relative to regions near busy airports.

Table 2: Top 20 city pairs in April 2019, with comparison to April 2020 (and percent change 2019 to 2020).

City pair	Flight count (2019)	Flight count (2020)	Change (%)
Melbourne-Sydney	4647	456	-90.19
Brisbane-Sydney	2985	466	-84.39
Brisbane-Melbourne	2172	283	-86.97
Gold Coast-Sydney	1594	49	-96.93
Melbourne-Adelaide	1544	196	-87.31
Canberra-Sydney	1487	120	-91.93
Adelaide-Sydney	1149	147	-87.21
Gold Coast-Melbourne	1065	0	-100.00
Melbourne-Perth	1049	258	-75.41
Hobart-Melbourne	946	85	-91.01
Brisbane-Cairns	945	149	-84.23
Melbourne-Canberra	923	121	-86.89
Auckland-Sydney	917	161	-82.44
Brisbane-Rockhampton	829	311	-62.48
Launceston-Melbourne	827	137	-83.43
Brisbane-Townsville	798	169	-78.82
Perth-Sydney	751	84	-88.81
Adelaide-Port Lincoln	709	140	-80.25
Brisbane-Mackay	652	296	-54.60
Auckland-Melbourne	607	51	-91.60

Table 3: Top 20 city pairs in April 2020, with comparison to April 2019 (and percent change 2019 to 2020).

City pair	Flight count (2019)	Flight count (2020)	Change (%)
Brisbane-Moranbah	333	541	62.46
Brisbane-Sydney	2985	466	-84.39
Melbourne-Sydney	4647	456	-90.19
Olympic Dam-Adelaide	262	368	40.46
Port Hedland-Perth	437	345	-21.05
Newman-Perth	467	339	-27.41
Brisbane-Rockhampton	829	311	-62.48
Brisbane-Mackay	652	296	-54.60
Brisbane-Melbourne	2172	283	-86.97
Karratha-Perth	507	271	-46.55
Melbourne-Perth	1049	258	-75.41
Brisbane-Emerald	347	245	-29.39
Cairns-Townsville	486	240	-50.62
Coondewanna-Perth	144	222	54.17
Adelaide-Port Augusta	252	214	-15.08
Hong Kong-Sydney	456	212	-53.51
Singapore-Sydney	585	202	-65.47
Melbourne-Adelaide	1544	196	-87.31
Kalgoorlie/Boulder-Perth	389	191	-50.90
Golden Grove-Perth	178	172	-3.37

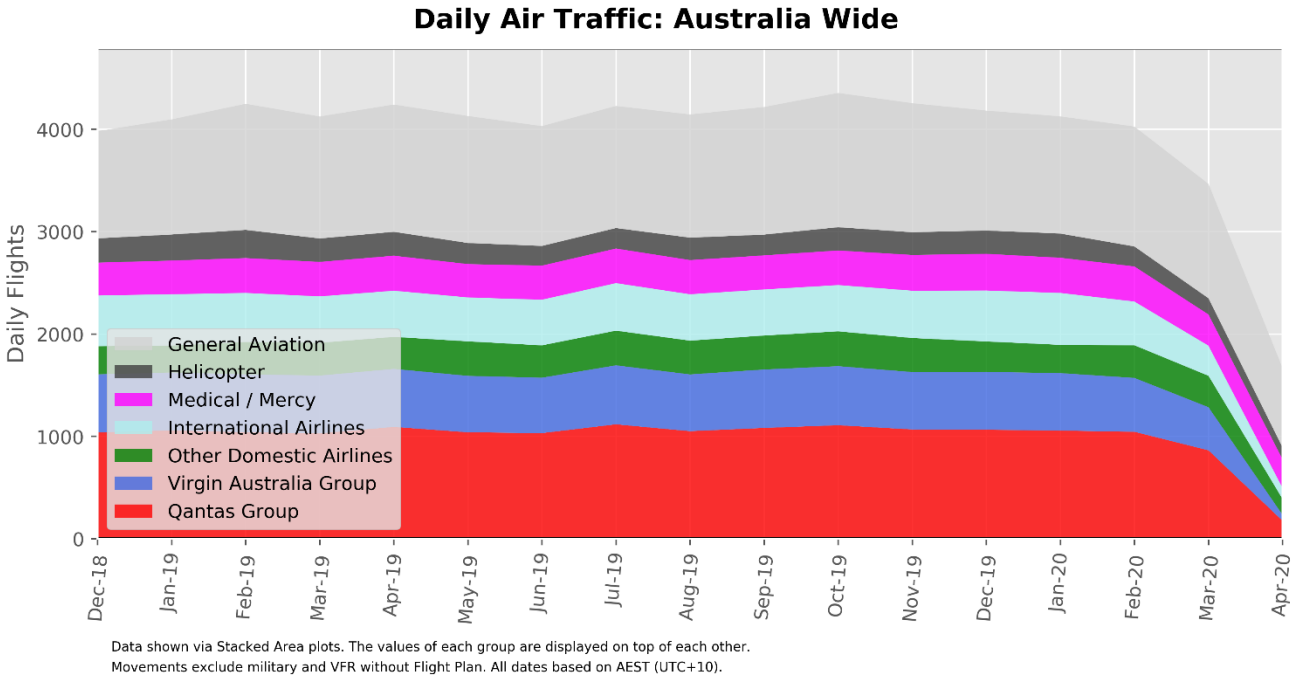

Figure 4: Traffic levels, shown as average daily flights by month, since December 2018. Flights have been categorised in various ways (e.g. major operators, general aviation, medical).

Network Wide Performance

Airborne delay

The 24-month combined median and 75th percentile airborne delay at the four major airports is indicated in **Figure 5**. The trends are upward for both measures.

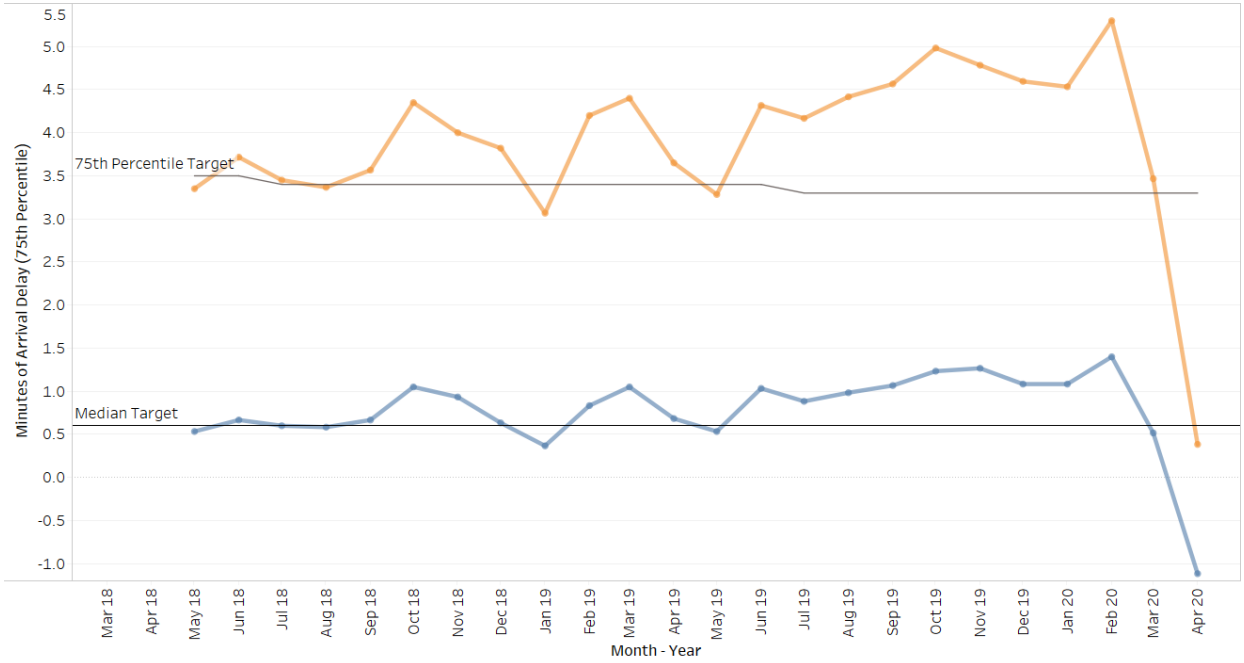

Figure 5: 24-month trend for airborne delay

The long term (48-month) trends of the 75th percentile airborne delay for each of the four major airports are depicted in **Figure 6.** The trend for Sydney is upwards. More detailed analysis for each airport is presented later in this report.

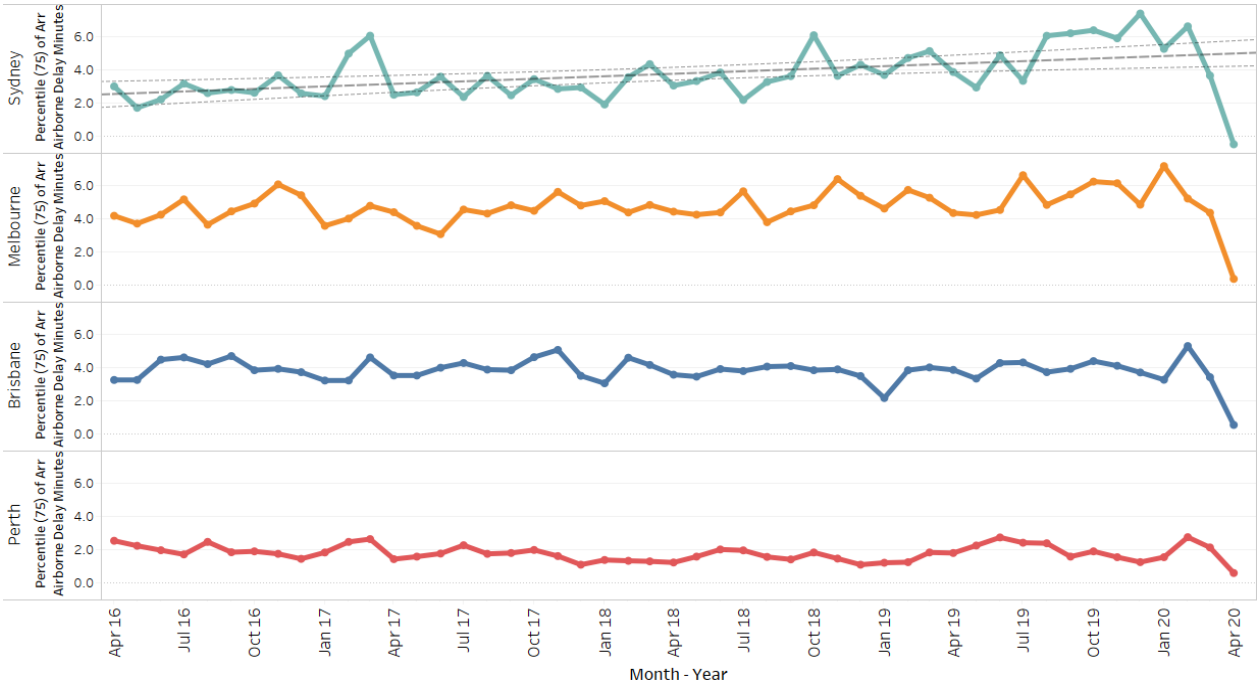

Figure 6: 48-month trend for airborne delay (75th percentile) by airport

Runway configuration

The runway configuration usage for each airport is shown in **Figure 7**. It shows the current month, the same month from the preceding year for comparison purposes, and the preceding 3 months.

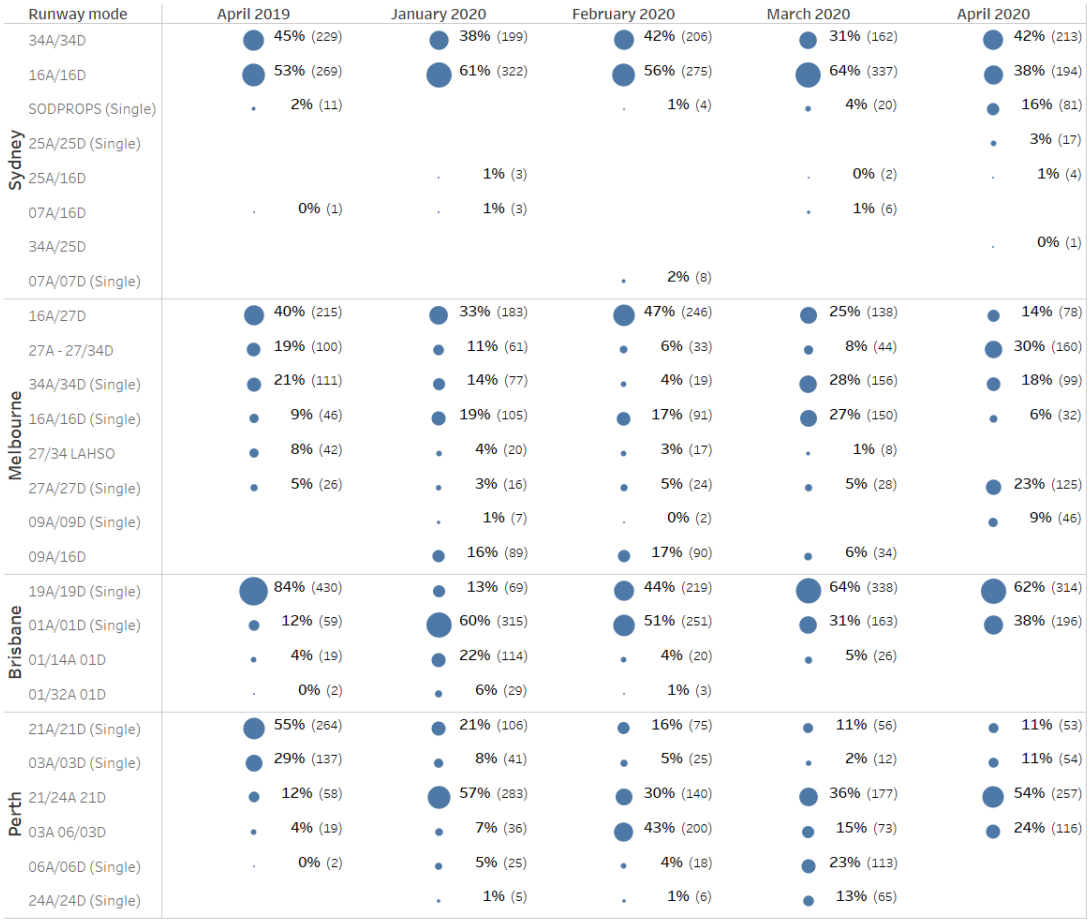

Figure 7: April runway configuration usage (percentage of total and hours in brackets) by airport (Sydney 06-22L, Melbourne 06-23L, Brisbane 06-22L and Perth 06-21L). Single runway configurations indicated in parentheses. Note: Sydney runway mode selection takes into account the Long Term Operating Plan to manage aircraft noise.

In Sydney the use of parallel 34 runway operations decreased by 7% compared to the same month last year (213 hours compared to 229 hours in April 2019). Additionally, the use of parallel 16 operations decreased by 28% (194 hours compared to 269 hours in April 2019). The overall single runway usage (runway 07/25 and SODPROPS) increased by almost ten times compared to the same month last year (98 hours compared to 11 hours in April 2019), SODPROPS was the predominate runway mode in each case. At times Runway 07/25 was closed and utilised for parking.

In Melbourne the availability of Land and Hold Short Operations (LAHSO) decreased from 42 hours in April 2019 to zero hours in April 2020. Due to low demand the use of LAHSO (higher capacity) would not be required. Single runway usage increased by 65% (302 hours compared to 183 hours in April 2019).

Brisbane had single runway operations for 96% of the time in April 2019 and 100% of the time in April 2020 with Runway 14/32 being utilised for parking. Single runway 01 operations increased by 232% compared to the same month last year (196 hours compared to 59 hours in April 2019). Single runway 19 operations decreased by 27% (314 hours compared to 430 in April 2019). The use of two runways for arrivals in Brisbane decreased from 42 hours in April 2019 to zero hours in April 2020.

Perth was required to use single runway operations for 22% of the time in April 2020. Single runway operations are 73% lower compared to the same month last year (107 hours compared to 403 hours in April 2019). Changes to reporting at Perth now capture weekend operating configurations. April 2019 and 2020 reporting hours now cover the entire 06-21 local hour reporting period.

Sydney

Airborne delay

The 75th percentile performance figures for airborne delay at Sydney are indicated in **Figure 8.** April performance for the median (-2.5 minutes) and the 75th percentile (-0.5 minutes) met the targets. Compared to the same month last year, there was a decrease in the airborne delay median performance (from 0.6 minutes) and in the 75th percentile performance (from 3.9 minutes).

Arrivals reduced from 14,514 in April 2019 to 2,130 in April 2020 (down 85%).

The long-term (48-month) trend for airborne delay at Sydney is upwards.

Figure 8: Sydney airborne delay 75th percentile (last 24 months)

Traffic changes by city pair

Table 4 shows the twenty busiest Sydney city pairs in April 2019 with a comparison to April 2020. **Table 5** shows the twenty busiest Sydney city pairs in April 2020 with a comparison to April 2019.

All of the top twenty Sydney city pairs from April 2019 decreased significantly in April 2020 (all by at least 53%). Sydney-Melbourne and Sydney-Brisbane remained the two busiest city pairs, but reversed order. Sydney flights to/from other large Queensland cities (Gold Coast, Cairns and Sunshine Coast) dropped more significantly and are no longer within the top twenty city pairs in April 2020.

International flights made up only three of the top twenty city pairs in April 2019, this increased to ten in April 2020. New South Wales flights made up seven of the top twenty city pairs in April 2019, this dropped to five in April 2020. With Dubbo, Wagga Wagga and Tamworth appearing in both months; Albury, Coffs Harbour, Armidale and Port Macquarie only in 2019; and Williamtown and Orange only in 2020.

Table 4: Top 20 city pairs including Sydney in April 2019, with comparison to April 2020 (and percent change 2019 to 2020).

City pair	Flight count (2019)	Flight count (2020)	Change (%)
Melbourne-Sydney	4647	456	-90.19
Brisbane-Sydney	2985	466	-84.39
Gold Coast-Sydney	1594	49	-96.93
Canberra-Sydney	1487	120	-91.93
Adelaide-Sydney	1149	147	-87.21
Auckland-Sydney	917	161	-82.44
Perth-Sydney	751	84	-88.81
Cairns-Sydney	599	22	-96.33
Singapore-Sydney	585	202	-65.47
Albury-Sydney	511	46	-91.00
Dubbo-Sydney	502	99	-80.28
Sunshine Coast-Sydney	478	1	-99.79
Sydney-Wagga Wagga	476	114	-76.05
Hobart-Sydney	467	3	-99.36
Hong Kong-Sydney	456	212	-53.51
Coffs Harbour-Sydney	390	50	-87.18
Armidale-Sydney	385	31	-91.95
Sydney-Tamworth	371	61	-83.56
Port Macquarie-Sydney	348	40	-88.51
Avalon-Sydney	328	8	-97.56

Table 5: Top 20 city pairs including Sydney in April 2020, with comparison to April 2019 (and percent change 2019 to 2020).

City pair	Flight count (2019)	Flight count (2020)	Change (%)
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Singapore-Sydney	585	202	-65.47
Auckland-Sydney	917	161	-82.44
Adelaide-Sydney	1149	147	-87.21
Canberra-Sydney	1487	120	-91.93
Sydney-Wagga Wagga	476	114	-76.05
Sydney-Shanghai	163	113	-30.67
Kuala Lumpur-Sydney	193	112	-41.97
Doha-Sydney	119	104	-12.61
Dubbo-Sydney	502	99	-80.28
Sydney-Guangzhou	143	84	-41.26
Perth-Sydney	751	84	-88.81
San Francisco-Sydney	116	80	-31.03
Sydney-Williamtown	205	74	-63.90
Honolulu-Sydney	224	65	-70.98
Sydney-Tamworth	371	61	-83.56
Orange-Sydney	273	60	-78.02
Incheon-Sydney	133	59	-55.64

Melbourne

Airborne delay

The 75th percentile performance figures for airborne delay at Melbourne are indicated in **Figure 9.** April performance for the median (-0.8 minutes) and the 75th percentile (0.4 minutes) did not meet the targets. Compared to the same month last year, there was a decrease in the airborne delay median performance (1.0 minutes), and in the 75th percentile performance (from 4.3 minutes).

Arrivals reduced from 10,264 in April 2019 to 1,213 in April 2020 (down 88%).

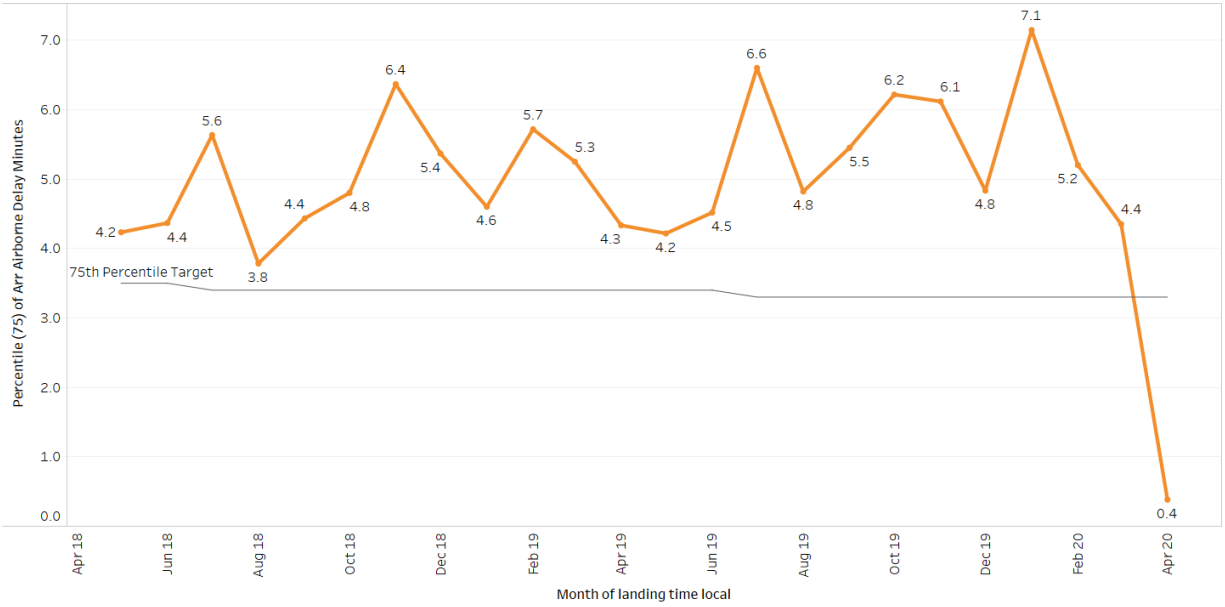

Figure 9: Melbourne airborne delay 75th percentile (last 24 months)

Traffic changes by city pair

Table 6 shows the twenty busiest Melbourne city pairs in April 2019 with a comparison to April 2020. **Table 7** shows the twenty busiest Melbourne city pairs in April 2020 with a comparison to April 2019.

All of the top twenty Melbourne city pairs from April 2019 decreased significantly in April 2020 (all by at least 75%). There was one change to the top eight city pairs between April 2019 and April 2020, with Melbourne-Gold Coast (2019) being replaced by Melbourne-Doha (2020) – with some reshuffling of order between the other seven city pairs. Melbourne-Sydney and Melbourne-Brisbane remained the two busiest city pairs. Melbourne flights to/from other large Queensland cities (Gold Coast, Cairns and Sunshine Coast) dropped more significantly and are no longer within the top twenty city pairs in April 2020.

International flights made up only five of the top twenty city pairs in April 2019, this increased to nine in April 2020. Doha was the only one of these international city pairs to gain flights between 2019 and 2020 – it was outside the top twenty in April 2019 and was the seventh busiest city pair for Melbourne in April 2020.

Table 6: Top 20 city pairs including Melbourne in April 2019, with comparison to April 2020 (and percent change 2019 to 2020).

City pair	Flight count (2019)	Flight count (2020)	Change (%)
Melbourne-Sydney	4647	456	-90.19
Brisbane-Melbourne	2172	283	-86.97
Melbourne-Adelaide	1544	196	-87.31
Gold Coast-Melbourne	1065	0	-100.00
Melbourne-Perth	1049	258	-75.41
Hobart-Melbourne	946	85	-91.01
Melbourne-Canberra	923	121	-86.89
Launceston-Melbourne	827	137	-83.43
Auckland-Melbourne	607	51	-91.60
Singapore-Melbourne	548	56	-89.78
Cairns-Melbourne	478	3	-99.37
Mildura-Melbourne	394	44	-88.83
Sunshine Coast-Melbourne	338	0	-100.00
Hong Kong-Melbourne	306	75	-75.49
Bali-Melbourne	300	13	-95.67
Melbourne-Williamtown	299	0	-100.00
Devonport-Melbourne	226	25	-88.94
Melbourne-Wynyard	213	25	-88.26
Christchurch-Melbourne	189	1	-99.47
Melbourne-Darwin	183	1	-99.45

Table 7: Top 20 city pairs including Melbourne in April 2020, with comparison to April 2019 (and percent change 2019 to 2020).

City pair	Flight count (2019)	Flight count (2020)	Change (%)
Melbourne-Sydney	4647	456	-90.19
Brisbane-Melbourne	2172	283	-86.97
Melbourne-Perth	1049	258	-75.41
Melbourne-Adelaide	1544	196	-87.31
Launceston-Melbourne	827	137	-83.43
Melbourne-Canberra	923	121	-86.89
Doha-Melbourne	60	110	83.33
Hobart-Melbourne	946	85	-91.01
Hong Kong-Melbourne	306	75	-75.49
Melbourne-Bankstown	55	67	21.82
Singapore-Melbourne	548	56	-89.78
Melbourne-Guangzhou	120	54	-55.00
Auckland-Melbourne	607	51	-91.60
Melbourne-Shanghai	86	50	-41.86
Dubai-Melbourne	119	50	-57.98
Mildura-Melbourne	394	44	-88.83
Kuala Lumpur-Melbourne	120	38	-68.33
Abu Dhabi-Melbourne	120	30	-75.00
Devonport-Melbourne	226	25	-88.94
Melbourne-Wynyard	213	25	-88.26

Brisbane

Airborne delay

The 75th percentile performance figures for airborne delay at Brisbane are indicated in **Figure 10**. April performance for the median (-0.6 minutes) and the 75th percentile (0.6 minutes) did not meet the targets. Compared to the same month last year, there was a decrease in the airborne delay median performance (from 1.2 minutes) and the 75th percentile (from 3.9 minutes).

Arrivals reduced from 8,910 in April 2019 to 2,256 in April 2020 (down 75%).

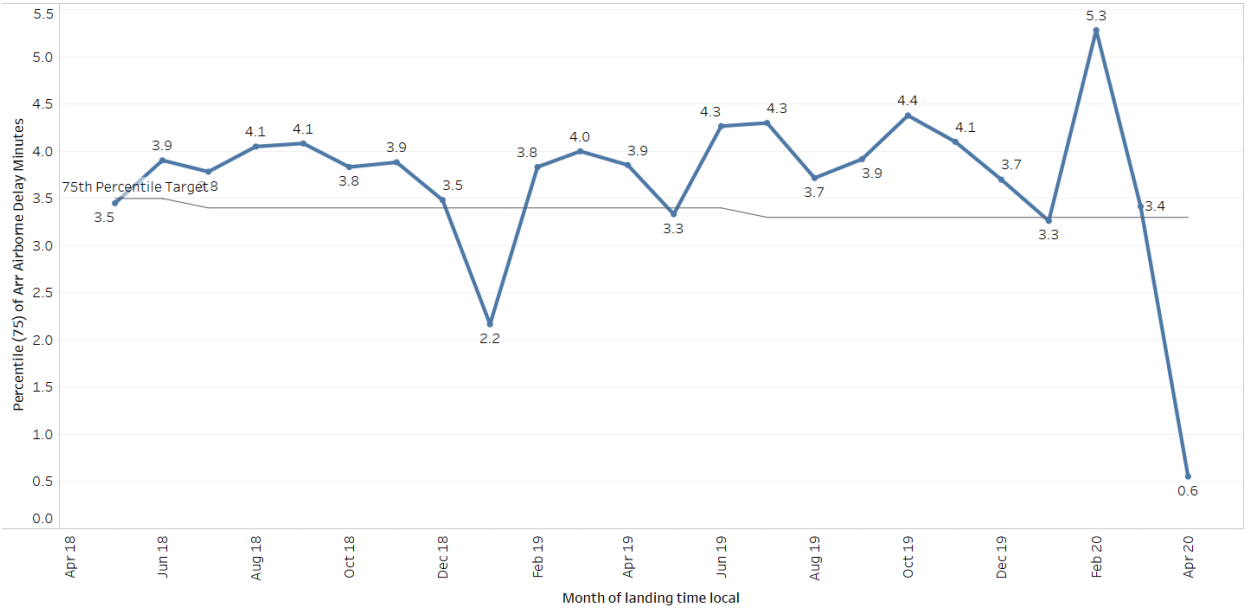

Figure 10: Brisbane airborne delay 75th percentile (last 24 months)

Traffic changes by city pair

Table 8 shows the twenty busiest Brisbane city pairs in April 2019 with a comparison to April 2020. **Table 9** shows the twenty busiest Brisbane city pairs in April 2020 with a comparison to April 2019.

All of the top twenty Brisbane city pairs from April 2019 decreased significantly in April 2020 (all by at least 29%) except Brisbane-Moranbah which increased by 62% to become the busiest city pair in Australia. Brisbane-Sydney and Brisbane-Melbourne remained the two busiest city pairs for locations outside Queensland, but they dropped from first and second overall, respectively, to second and fifth, respectively.

International flights made up only three of the top twenty city pairs in April 2019, this decreased to one in April 2020. Queensland flights made up ten of the top twenty city pairs in April 2019, this increased to fourteen in April 2020 (with thirteen of the top fifteen).

Table 8: Top 20 city pairs including Brisbane in April 2019, with comparison to April 2020 (and percent change 2019 to 2020).

City pair	Flight count (2019)	Flight count (2020)	Change (%)
Brisbane-Sydney	2985	466	-84.39
Brisbane-Melbourne	2172	283	-86.97
Brisbane-Cairns	945	149	-84.23
Brisbane-Rockhampton	829	311	-62.48
Brisbane-Townsville	798	169	-78.82
Brisbane-Mackay	652	296	-54.60
Brisbane-Canberra	544	44	-91.91
Brisbane-Adelaide	540	29	-94.63
Brisbane-Perth	503	53	-89.46
Brisbane-Williamtown	470	19	-95.96
Auckland-Brisbane	466	23	-95.06
Brisbane-Gladstone	450	140	-68.89
Brisbane-Bundaberg	416	150	-63.94
Singapore-Brisbane	362	8	-97.79
Brisbane-Emerald	347	245	-29.39
Brisbane-Moranbah	333	541	62.46
Brisbane-Hervey Bay	250	90	-64.00
Brisbane-Roma	222	120	-45.95
Brisbane-Darwin	215	52	-75.81
Bali-Brisbane	180	0	-100.00

Table 9: Top 20 city pairs including Brisbane in April 2020, with comparison to April 2019 (and percent change 2019 to 2020).

City pair	Flight count (2019)	Flight count (2020)	Change (%)
Brisbane-Moranbah	333	541	62.46
Brisbane-Sydney	2985	466	-84.39
Brisbane-Rockhampton	829	311	-62.48
Brisbane-Mackay	652	296	-54.60
Brisbane-Melbourne	2172	283	-86.97
Brisbane-Emerald	347	245	-29.39
Brisbane-Townsville	798	169	-78.82
Brisbane-Bundaberg	416	150	-63.94
Brisbane-Cairns	945	149	-84.23
Brisbane-Gladstone	450	140	-68.89
Brisbane-Roma	222	120	-45.95
Brisbane-Hervey Bay	250	90	-64.00
Brisbane-Sunshine Coast	81	81	0.00
Brisbane-Miles	47	64	36.17
Brisbane-Mount Isa	148	61	-58.78
Brisbane-Perth	503	53	-89.46
Brisbane-Darwin	215	52	-75.81
Port Moresby-Brisbane	177	51	-71.19
Brisbane-Brisbane West Wellcamp	70	50	-28.57
Brisbane-Bankstown	36	45	25.00

Perth

Airborne delay

The 75th percentile performance figures for airborne delay at Perth are indicated in **Figure 11**. April performance for the median (-1.1 minutes) and the 75th percentile (0.6 minutes) met the targets. Compared to the same month last year, there was a decrease in the airborne delay median performance (from -0.3 minutes) and the 75th percentile (from 1.8 minutes).

Arrivals reduced from 5,577 in April 2019 to 2,950 in April 2020 (down 47%).

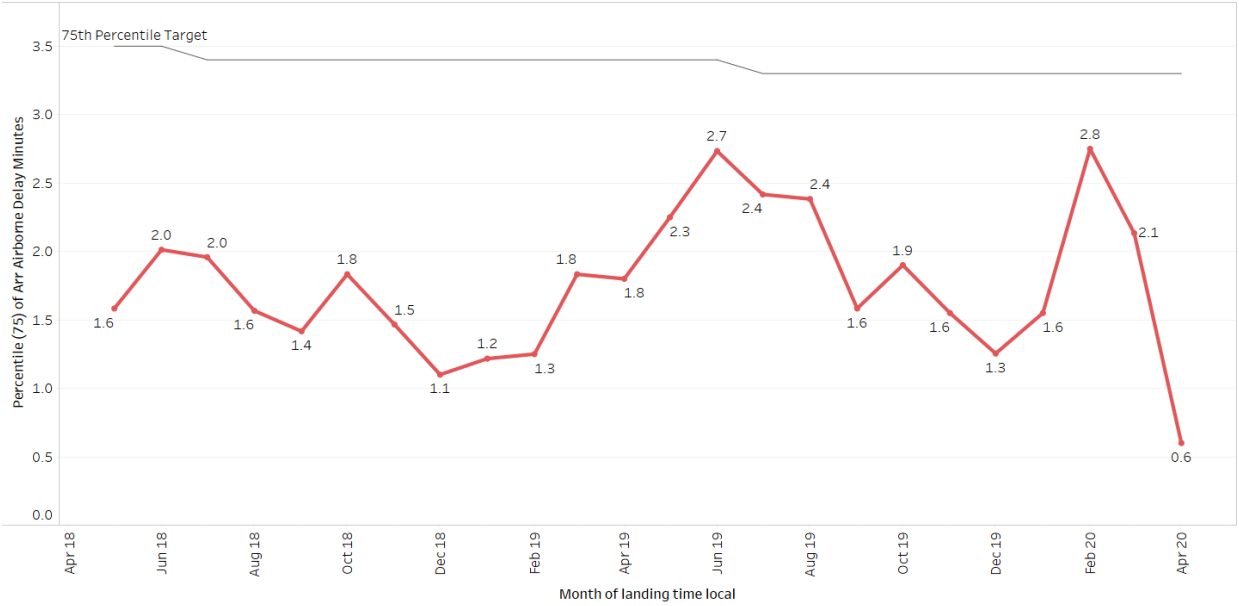

Figure 11: Perth airborne delay 75th percentile (last 24 months)

Traffic changes by city pair

Table 10 shows the twenty busiest Perth city pairs in April 2019 with a comparison to April 2020. **Table 11** shows the twenty busiest Perth city pairs in April 2020 with a comparison to April 2019.

All of the top twenty Perth city pairs from April 2019 decreased significantly in April 2020 (all by at least 20%) except Perth-Golden Grove which only decreased by 3%, and Perth-Leinster and Perth-Coondewanna which increased by 5% and 54%, respectively. Nine of the top twenty city pairs in April 2020 had increased since April 2019. Perth-Melbourne remained the busiest city pair for locations outside Western Australia, but dropped from first to fourth overall.

International flights made up only three of the top twenty city pairs in April 2019, this decreased to zero in April 2020. Western Australia flights made up thirteen of the top twenty city pairs in April 2019, this increased to nineteen in April 2020.

Table 10: Top 20 city pairs including Perth in April 2019, with comparison to April 2020 (and percent change 2019 to 2020).

City pair	Flight count (2019)	Flight count (2020)	Change (%)
Melbourne-Perth	1049	258	-75.41
Perth-Sydney	751	84	-88.81
Karratha-Perth	507	271	-46.55
Brisbane-Perth	503	53	-89.46
Bali-Perth	482	12	-97.51
Newman-Perth	467	339	-27.41
Adelaide-Perth	465	30	-93.55
Port Hedland-Perth	437	345	-21.05
Kalgoorlie/Boulder-Perth	389	191	-50.90
Singapore-Perth	370	72	-80.54
Broome-Perth	324	144	-55.56
Kuala Lumpur-Perth	283	25	-91.17
Albany-Perth	226	78	-65.49
Paraburdoo-Perth	214	168	-21.50
Geraldton-Perth	196	86	-56.12
Golden Grove-Perth	178	172	-3.37
Esperance-Perth	163	43	-73.62
Leinster-Perth	150	157	4.67
Coondewanna-Perth	144	222	54.17
Boolgeeda-Perth	125	100	-20.00

Table 11: Top 20 city pairs including Perth in April 2020, with comparison to April 2019 (and percent change 2019 to 2020).

City pair	Flight count (2019)	Flight count (2020)	Change (%)
Port Hedland-Perth	437	345	-21.05
Newman-Perth	467	339	-27.41
Karratha-Perth	507	271	-46.55
Melbourne-Perth	1049	258	-75.41
Coondewanna-Perth	144	222	54.17
Kalgoorlie/Boulder-Perth	389	191	-50.90
Golden Grove-Perth	178	172	-3.37
Paraburdoo-Perth	214	168	-21.50
Leinster-Perth	150	157	4.67
Barimunya-Perth	123	150	21.95
Broome-Perth	324	144	-55.56
Mount Keith-Perth	77	128	66.23
Cape Preston-Perth	100	120	20.00
Mount Magnet-Perth	72	117	62.50
West Angelas-Perth	83	116	39.76
Perth-Solomon	102	111	8.82
Boolgeeda-Perth	125	100	-20.00
Ginbata-Perth	90	92	2.22
Geraldton-Perth	196	86	-56.12
Christmas Creek-Perth	102	86	-15.69

Appendix A

Definitions

The following terms are used to categorise delay events in this report:

1. **Significant event**: prolonged and moderately elevated airborne delay for the entire day (i.e. 75th percentile greater than 7 minutes across the entire day).In contrast to previous months, not all of these events are included under each of the airport sections. Only those categorised under the “distinctive event” terminology are included.
2. **Notable event**: shorter and more intense periods of elevated airborne delay (i.e. two or more consecutive hours where the 75th percentile was over 10 minutes). These are considered so comparisons to previous months can be made, and counts are included in the Arrival Airborne Delay KPI commentary. In contrast to previous months, not all of these events are included under each of the airport sections. Only those categorised under the “distinctive event” terminology are included.

Corporate Plan Key Performance Indicator Profile: Arrival airborne delay

Corporate Plan Description:

The median (and 75th percentile) excess time incurred during the arrival airborne phase of flight in reference to the estimated time of arrival for high-volume operations. (High volume operating environments defined as Brisbane, Melbourne, Perth and Sydney).

Corporate Plan Targets:

Year	18/19	19/20	20/21	21/22
75%	3.4	3.3	3.2	3.1
Median	0.6	0.6	0.6	0.6

What is it: Excess time incurred during the arrival phase of flight.

What is measured: It is measured by comparing the estimated flight time and actual flight time for the portion of the flight within 250 NM of the destination aerodrome.

Why 250NM: The 250NM threshold has been identified as the distance from the aerodrome at which tactical arrival demand/capacity balancing measures start taking effect. It is a true reflection of the tactical arrival management of the flight, and is not skewed by other non-related issues such as congestion at the departure aerodrome.

Why measure Median rather than Average/Mean: In some cases, the actual flight time within 250NM of the destination aerodrome will be less than the estimated flight time (e.g.: ATC has provide track shortening). In the dataset, this translates into a 'negative' value for that particular flight.

The Median shows the mid-point of the data set and allows us to demonstrate our impact on all flights, not just the ones that were delayed. Additionally, over short timeframes and small datasets (such as a daily report), Median measurement is more resilient to data errors and small groups of outliers which may skew the average.

Why measure the 75th percentile: This supplements the Median and is valuable to demonstrate how effectively we have managed the arrival of most of the fleet.

The last 25th percentile can typically contain arrival data from flights that were impacted by non-routine events, such as Medical priority traffic or aircraft in an emergency or diversion.

How do we measure:

Uses the high-fidelity Dalí aircraft trajectory model. For Sydney, some assumptions are built in to calculations as the actual flight path is unique for each flight (open STARs).